GEO
ENVIRONMENTAL
SERVICES, INC.

MCDONNELL DOUGLAS CORPORATION
of
ST. LOUIS, MO.

UNDERGROUND STORAGE TANK REMOVAL

CLOSURE REPORT

March 17, 1993

GES Report # 01102292

PREPARED BY : GEO ENVIRONMENTAL SERVICES, INC.
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A Certified Professional Engineering Corporation

GEO ENVIRONMENTAL SERVICES, INC.

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March 17, 1993

Mr. George E. Wader
Project Manager
Fred Weber, Inc.
P.O. Box 2501, 2320 Creve Coeur Mill Road
Maryland Hgts., MO 63043-8501

Re: McDonnell Douglas Corporation, **UST Closure Report**

Dear Mr. Wader,

Attached, please find GES report #0112292 related to the above referenced project. We appreciate the opportunity to serve you and look forward to providing services as you require in the future.

If you have any questions, please do not hesitate to call us at (314) 991-2060. Thank you.

PREPARED BY

Ellis A. Shiblee

Ellis A. Shiblee, R.E.P.,
Environmental Manager

REVIEWED BY

Harlan H. Bengtson

Harlan H. Bengtson, P.E.,
President

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UST CLOSURE REPORT

I. INTRODUCTION

Geo Environmental Services, Inc. (GES), submitted a proposal on December 10, 1992 at the request of Fred Weber, Inc., the general contractor, to remove one 2,000-gallon underground storage tank (designated as the F-18 Silencer Waste Tank under Hazardous Waste Facility Permit#OSO62284002; MOD000818963) previously containing jet fuel located behind Engine Test Cell On Ramp Area of the McDonnell Douglas Corporation (MDC) of St. Louis, MO. GES was subsequently awarded the contract. The notification process for the tank removal was handeled by the Environmental and Hazardous Materials Services Department of the MDC.

II. NOTIFICATIONS

On Dec. 21, 1992, the Environmental and Hazardous Materials Services Department of the MDC informed GES that notification of tank removal to the MODNR was submitted on Nov. 2, 1992 and the UST in question needed to be addressed with applicable 40 CFR 280 requirements, MODNR UST Guidelines, and the Part B closure plan. Please refer to appendix A for a copy of the notification letter.

III. SITE SAFETY

GES developed a comprehensive site safety plan on December 16, 1992 as per regulations and consistent with ' McDonnell Douglas Confined Space Entry Procedures ' and handed over the 'work and site safety plan' to Fred Weber, Inc. A proposed project schedule was also developed at this time. Please see Appendix A for a copy of site safety plan and MDC procedures. On December 29, 1992 a meeting with all site personnel was held at the job site to coordinate the project and review the safety plan.

IV. PERSONNEL CERTIFICATIONS

As per United States Environmental Protection Agency (USEPA) regulations and Missouri Department of Natural Resources (MODNR) requirements, all site personnel engaged at this underground storage tank (UST) removal project had successfully completed a 40-hour course of classroom instruction in hazardous waste site operations in fulfillment of the requirements of 29 CFR 1910.120 as mandated by the Occupational Safety and Health Administration (OSHA). Geo Environmental handed over training documentations to Fred Weber on December 18, 1992. Copies of 'Certificate of Training' of all GES personnel are located in the Appendix B.

V. LABORATORY ANALYSIS & SAMPLING STRATEGY

On December 30, 1992 ground was broken. A jack hammer and a backhoe removed the initial 8" of conncrete pavement to expose the soils. Approximately 4' (four feet) of soil was excavated to get to the top of the fiberglass tank. No visible signs of leakage of products was observed. This was subsequently field confirmed utilizing a calibrated Photo Ionization Detector (P.I.D). Please refer to Appendix C for a copy of P.I.D rental contract. After removal of the tank the backhoe bucket reached to the native soil at about 13.0' and picked up one scoop of dark brown stiff clay from the center of the pit. The backhoe bucket also extracted a scoop of black stiff clay from the down gradient wall at about 6.5'. A third soil sample was also obtained from underneath the center of the fuel line. A deionized, clean stainless steel scoop was utilized to extract representative samples which were placed in appropriate pre-cleaned, teflon-lined sample containers. All sample containers were labeled, preserved on ice, and were shipped to CasChem Laboratories, Inc.(CCL), Canton, Ohio for laboratory analysis.

Sample Chain of Custody documentations were maintained. GES personnel performed field sampling following USEPA approved method : EPA-600/4-83-040, September, 1983. Please refer to Appendix C for 'UST Removal-Site Plan' and 'Chain of Custody Documentations' for sample locations and other pertinent information.

The Laboratory analysis report issued on January 15, 1993 by CasChem Laboratories, Inc. indicated absence of Volatile Organics including Benzene, Toluene, Ethylbenzene and Xylenes. The remaining parameters of TPH (total petroleum hydrocarbon), P.C.B's, TCLP Lead and Oil & Grease were below analytical detection limits. Please turn to Appendix D,- 'Laboratory Analysis' section for copies of laboratory analysis results.

VI. SLUDGE DISPOSAL

Initial cleaning of remaining residue within the tank and lines was performed prior to any actual work. On December 29, 1992, approximately 25 gallons of residual hydrocarbons were pumped out of associated tank piping utilizing a vacuum truck provided by the Environmental and Hazardous Materials Services Department of the MDC. The material was then run through an oil/water separator. Sludge was placed into 2-55 gallon steel drums for shipment to a hazardous waste fuel blender by MDC.

Product recovered was pumped into a vacuum truck and transported to the point of use by MDC. Associated rinse water generated from cleaning of tank was drummed and later pretreated at the MDC on site pretreatment plant prior to discharge to the local POTW. After the removal of product, tank pipes were cut and plugged.

VII. TANK DISPOSAL

Prior to scrapping, the tank was cleaned using high pressure (2,000 psi) water with a tank cleaning device. This process involved cutting the top out of the tank first, followed by venting and final rinsing. Resulting rinse water was drummed in 55 gallon drums for MDC on site pretreatment prior to discharge to the local POTW. The fibreglass tank was cut into numerous pieces for proper disposal. Please refer to Appendix E-'Photographs' section of this document for picture documentation.

During the venting process precaution was taken to monitor work area for personal safety utilizing calibrated Oxygen, Explosive Gas (LEL Meter) and Organic Vapor Detectors.

VIII. BACK FILL

On December 31, 1992 at the completion of tank removal and excavation, the trench was backfilled with clean* excavated soils and pea gravel and compacted to grade.

*-Field examination and organic vapor analysis (with a P.I.D) of excavated soils did not indicate presence of any contamination as evidenced by absence of smell and soil stain marks and persistent 0.00 ppm readings on the P.I.D. Geo Environmental on Jan. 19, 1993 discussed with Mr. Mike Struckhoff, Chief, Hazardous Waste Unit of the MODNR, St. Louis Regional Office regarding this issue and was subsequently advised by him to mention the above explanation in the closure report.

IX. GROUNDWATER MONITORING WELL

A 10' long, 6" diameter P.V.C. flush mounted grundwater monitoring well was installed prior to backfilling the trench with pea gravel and capped and grouted with cement as per MDC Environmental and Hazardous Materials Services Department specifications. The following monitoring well components were used:

1	6" x 5' Triloc Screen 0.020
1	6" x 5' Threaded Riser PVC Pipe
1	8" Well Cover, 12" Skt
1	6" Threaded Male Cap, Top
1	6" Female Threaded Plug, Bottom

X. CONCLUSION

The underground storage tank was closed in accordance with the approved closure plan. We recommend that the closure be approved.

Please refer to Appendix G for a copy of the UST Closure Report form- Part A.

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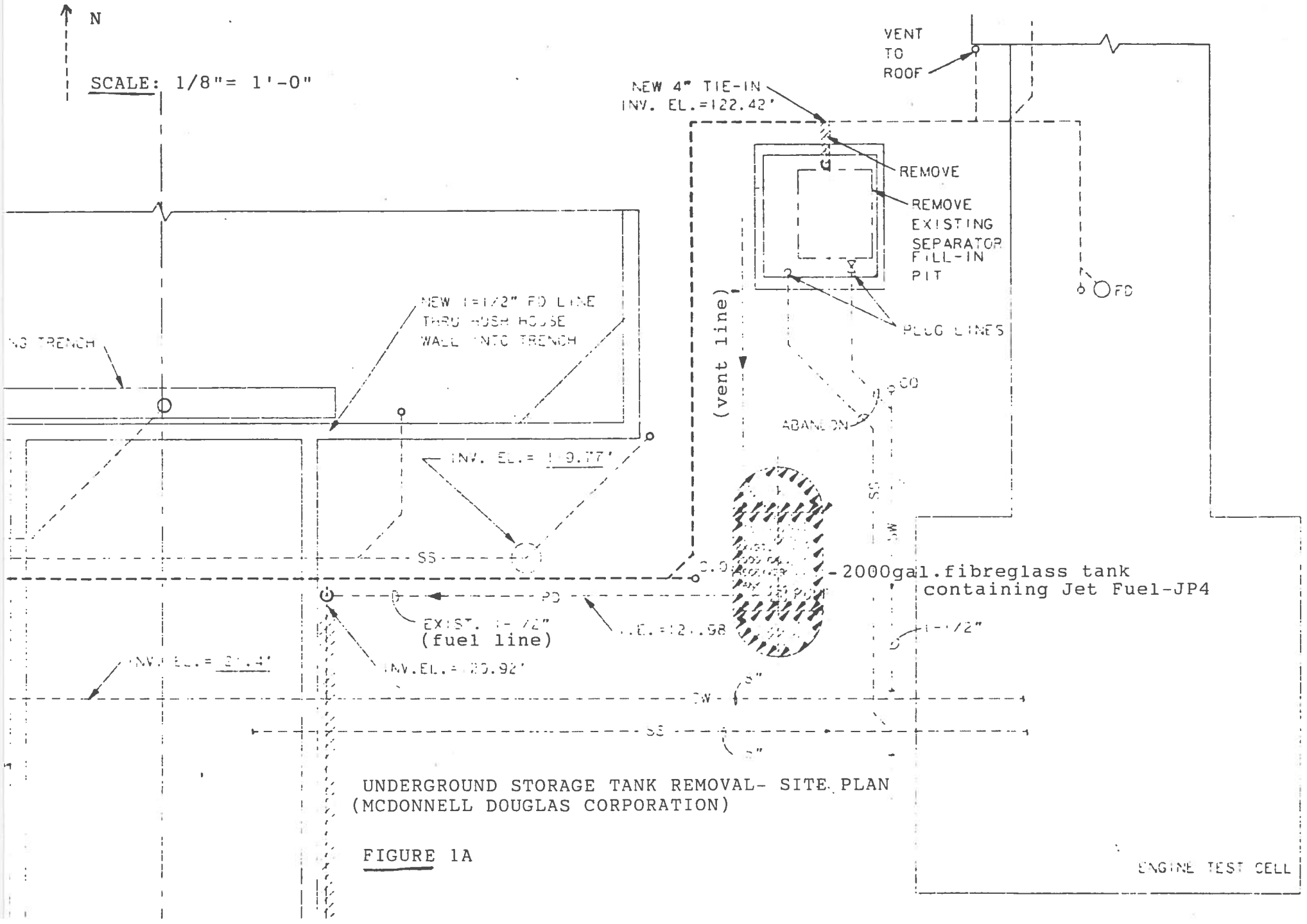
FIGURE

SITE PLAN

1A



UNDERGROUND STORAGE TANK REMOVAL- SITE PLAN
(MCDONNELL DOUGLAS CORPORATION)

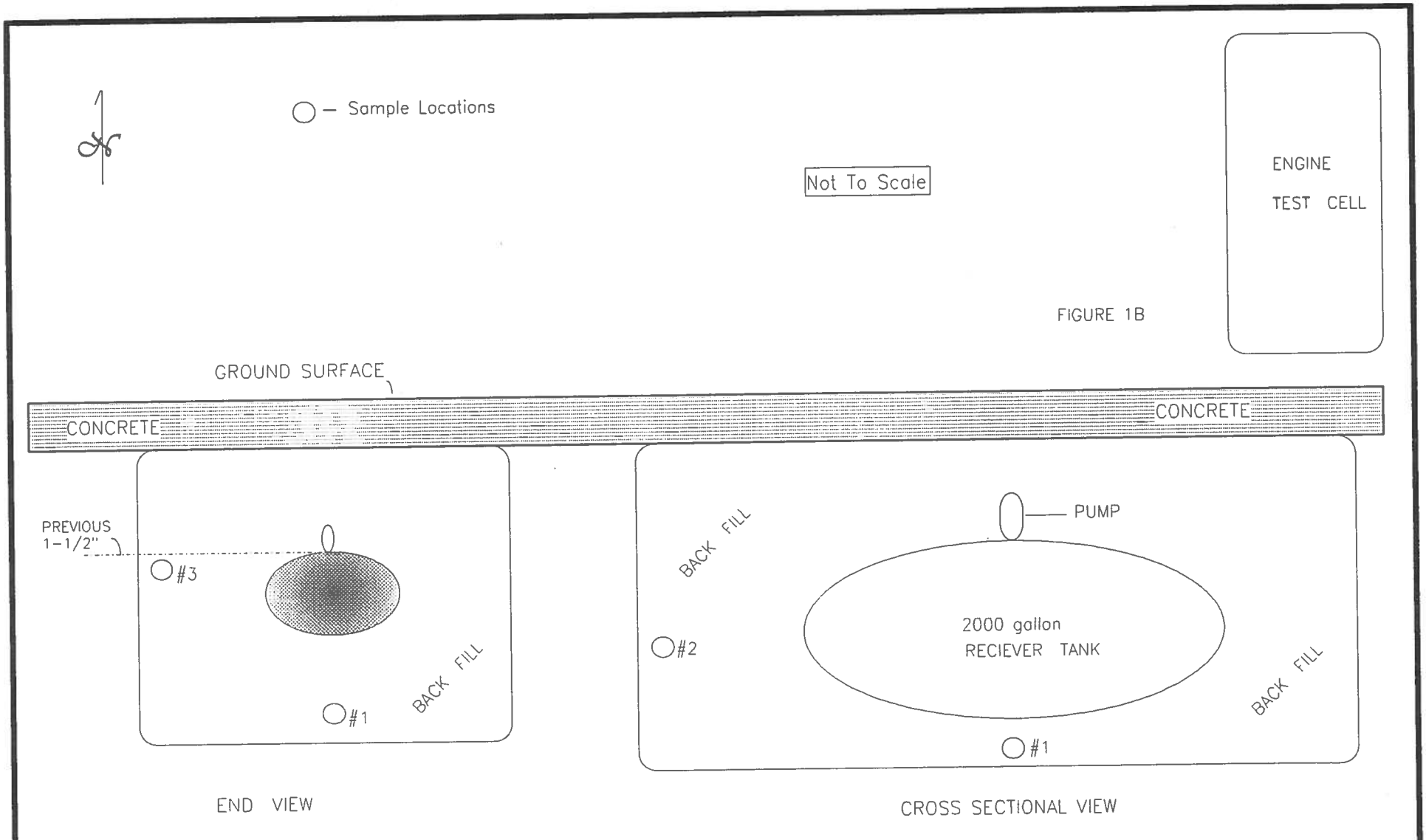
FIGURE 1A

GEO ENVIRONMENTAL SERVICES, INC.

FIGURE

SITE PLAN /
SAMPLE LOCATION MAP

1B



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UNDERGROUND STORAGE TANK REMOVAL - SITE PLAN

MCDONNELL DOUGLAS CORPORATION

GES PROJECT # 0112292

APPENDIX A

NOTIFICATION OF TANK REMOVAL
SITE SAFETY PLAN

MCDONNELL DOUGLAS

McDonnell Aircraft Company

064C-2711
File 2/3

02 November 1992

Mr. Ed. Sadler
Director, Waste Management Program
Missouri Department of Natural Resources
Division of Environmental Quality
P.O. Box 176
Jefferson City, Missouri 65102

Subject: Hazardous Waste Facility Permit OSO 62284002; MOD000818963

Dear Mr. Sadler:

This letter is to inform you of our plan to close the 2000 gallon capacity, horizontal, below grade storage tank designated as the F-18 silencer waste tank. The tank is utilized for storage of jet fuel.

The tank will be removed before the end of the year. Underground storage tank requirements (40 CFR 280), Missouri underground storage tank guidelines, and the Part B olosure plan will be followed. Upon completion, a report and registered professional engineer's certification will be submitted.

Please contact me should you need additional information.

Sincerely,

Joe Haake

Joe Haake, Group Manager
Environmental and Hazardous Materials Services
Dept. 064C, Mail Code 0343530
314-232-6941

JH:dsq

EC: Bob Stewart, EPA

GEO
ENVIRONMENTAL
SERVICES, INC.

SITE SAFETY PLAN

GEO
ENVIRONMENTAL
SERVICES, INC.

SITE SAFETY PLAN

for

UNDERGROUND STORAGE TANK REMOVAL

Behind Engine Test Cell On Ramp Area

McDONNELL DOUGLAS CORPORATION

December 16, 1992

PREPARED BY: **Geo Environmental Services, Inc**
8515 Delmar, Suite 212
St. Louis, MO 63124

Tel: 314-991-2060
Fax: 314-991-4134

✧ A Certified Professional Engineering Corporation ✧

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SITE SAFETY PLAN

The following site safety plan is designed for the underground storage tank (UST) removal, the seperator tank cleaning and the waste oil tank removal portion of the Oil/ Water Seperator Tank Installation project.

A. SITE DESCRIPTION

Date: December 28, 1992

Location: McDonnell Douglas Corporation
Behind Engine Test Cell On Ramp Area
St. Louis, Missouri

Surrounding Population: Manufacturing

Hazard: Volatile Organics (Jet Fuel)

Benzene
Toluene
Ethylbenzene
Total Xylene

B. PROJECT OBJECTIVES

1) The UST removal portion of this project consists of excavating, initial cleaning, removal, final cleaning and scrapping of one (1) 2,000 gallon steel tank previously containing jet fuel. Associated with this project is the potential for disposal of residual product, rinse waters and contaminated soil. Scheduled on-site activities are as follows:

Site Mobilization
Initial Cleaning
Tank # 1 Excavation/Cleaning/Scrapping
Installation of Groundwater Monitoring Well
Disposal -Liquid
Sampling
Backfilling Pit
Laboratory Analysis
Site Demobilization

2) The 6.5'x6.5'x6.5' oil/water seperator tank cleaning portion of this project involves:

Initial Steam Cleaning
Scraping Walls With Inert Substance
Rinsing Walls With Hot Water
Tri- Sodium Phosphate Rinsing
Final Rinsing With Steam
Disposal -Liquid
Backfilling Pit

3) The approximately 1.0 cubic yard size waste tank removal portion of this project involves:

Initial Cleaning
Tank# 2 Excavation/Cleaning/Srapping
Installation of Groundwater Monitoring Well
Disposal -Liquid
Transportation -Solids
Sampling
Backfilling Pit
Laboratory Analysis

Prior to site activities, all personnel associated with site specific operations will attend a Site Safety meeting (date and time to be arranged) to be conducted by the Safety Coordinator. During this meeting all aspects of this document will be discussed and any questions concerning Site Safety will be addressed. In addition, the Safety Coordinator will check to be sure that any personnel expected to be within the exclusion zone, has the proper personal protective equipment and that it is in good condition.

During excavation, cleaning, and scrapping activities the Safety Coordinator will be present to monitor operations and coordinate personal protective measures.

C. ON-SITE ORGANIZATION AND COORDINATION

Prime Contractor: Fred Weber, Inc.
2320 Creve Coeur Mill Road
Maryland Heights, MO 63043

Project Manager:	George Wader
	314-344-0070
Mobile	314-791-3391
Job Superintendent	Dennis Byrd
	314-344-0070
Pager	314-871-0447

Subcontractor: Geo Environmental Services, Inc.
8515 Delmar, Suite# 212
St. Louis, MO 63124

Project Manager	Ellis Shiblee
	314-991-2060
Beeper	314-841-6400
Cellular	314-580-0948
Superintendent	Kendrick Cooper
	314-291-0208
Beeper	314-848-5158
Mobile	314-330-5502
Safety Coordinator	Ellis Shiblee
	314-991-2060
Beeper	314-841-6400
Cellular	314-580-0948
Alternate	Harlan Bengtson
	314-991-2060

McDonnell Douglas Representatives:

Project Engineer	Denny Harris
	314-232-2354
Pager	314-554-5442
Environmental Engineer	Gary Heller
	314-234-2731
Pager	314-841-3879

D. ON-SITE CONTROL

During tank activities the project area will be divided into exclusion zones, a contamination reduction zone, and a support zone as appropriate.

The exclusion zones are the areas of initial cleaning, excavation, and final cleaning and will require Level C protection during cleaning and Level D protection during excavation. It should be noted that, based on employee and site monitoring, during excavation, the level of protection may be upgraded to Level C, or higher and the level of protection during the seperator tank cleaning job, the level of protection may be upgraded to Level B. This decision will be made by the Safety Coordinator.

The contamination reduction zone is provided for both personnel and equipment decontamination as required. Specific documrntation protocols are outlined under Section I of this document.

The support zone is dedicated to equipment staging and management activities.

H. HAZARD EVALUATION

As excavation, cleaning, and scrapping proceeds, specific activities will be monitored by the Safety Coordinator trained in detecting potential employee exposure during each activity. The use of such direct reading instruments as:

- Combustible Gas Meter
- Oxygen Indicating Meter
- Photoionization Detector

will be supplemented as appropriate by laboratory analysis.

Detection of organic vapors greater than background may require personal protection equipment upgrade to level C at the discretion of the Safety Coordinator.

Should confined space entry be required, procedures will be in accordance with the McDonnell Douglas **Confined Space Entry Procedure** dated March 16, 1988 and incorporated herein as Attachment A.

F. PERSONAL PROTECTIVE EQUIPMENT

Based on evaluation of potential hazards, the following levels of personal protection have been designated for the applicable work areas or tasks:

Location Job Function Level of Protection

	A	B	C	D	Other
Initial Cleaning			x		
Excavation				x	
Final Cleaning			x		
Scrapping				x	
Disposal - Liquid				x	
Transportation - Solid				x	

Protective equipment for each level of protection is as follows:

Level A

Required:

-Pressure demand, full face piece SCBA, or pressure demand supplied air respirator with escape SCBA.
-Fully encapsulating, chemical-resistant suit.
-Inner and outer chemical-resistant gloves.
-Chemical-resistant safety boots/shoes.
-Two-way radio communication

Optional:

-Cooling unit.
-Coveralls.
-Long cotton underwear.
-Hard hat.
-Disposable gloves and boot covers.

Level B

Required:

-Pressure demand, full face piece SCBA, or pressure demand supplied air respirator with escape SCBA.
-Polycoated tyvec with hood cover.
-Inner and outer chemical-resistant gloves.
-Chemical-resistant safety boots/shoes.
-Hard hat.

Optional:

-Cooling unit.

Level C

Required:

-Full face piece air-purifying, canister-euipped respirator.
-High Efficiency organic vapor cartridge (type below)
-Polycoated tyvec with hood cover.

-Inner and outer chemical-resistant gloves.
-Chemical-resistant safety boots/shoes.
-Hard hat.

Level D

Required:

-Tyvec outer garment.
-Inner and outer chemical-resistant gloves.
-Chemical-resistant safety boots/shoes or outer boots.
-Safety glasses or chemical splash goggles.
-Hard hat.

Where air purifying respirators are authorized a high efficiency organic vapor (AO Model R51HE or equivalent) is the appropriate canister for use with the involved substances and anticipated concentrations. The Safety Coordinator will determine that all criteria for using this type of respiratory protection will be met, prior to specific activities.

NO CHANGES TO THE SPECIFIC LEVELS OF PROTECTION SHALL BE MADE WITHOUT THE APPROVAL OF THE SAFETY COORDINATOR

G. ON-SITE WORK PLANS

The general work plan will be a progressive sequence of activities as specified below:

Site Mobilization :

During site mobilization the following equipment will be brought to the site and appropriately staged:

Work Truck
Safety Equipment
Monitoring Equipment
Cleaning Equipment
Track Hoe

Specific work zones (i.e., exclusion, decontamiantion, and support) will be established and marked.

The initial site-safety meeting will be conducted.

Initial Cleaning :

Prior to any actual tank work, initial cleaning of remaining residue within the tanks and lines will be done via vacuum truck. Should access opening be insufficient for vacuum operations, appropriate MDC cutting permits will be obtained and required access will be made using cold cutting procedures. It should be noted that confined space entry is not anticipated.

Residual hydrocarbons will be drummed for MDC disposal per Specifications.

Prior to tank removal, combustible gas oxygen readings shall be made to insure a safe working environment. Should combustible gas be of concern, degas procedures using carbon dioxide will be performed until readings are less than 10 percent of the LEL.

Excavation/Cleaning/scrapping :

Upon initial cleaning, each tank will be loaded on a "low-boy" for relocation to a staging area for final cleaning and scrapping. Upon excavation, all soil will be checked for contamination using a portable photoionization detector. Any soil showing signs of contamination shall be placed in supplied containers for transportation off-site.

During excavation of the tanks, removal of only the soil required to perform the tank removal will be done. Any additional soil to be removed will be determined by the Environmental Compliance Department of MDC.

Any visible floating product will be recovered and run through a seperator. Any hydrocarbons will be drummed for MDC disposal with the water beeing discharged into the MDC Industrial Waste (I.W.) sewers.

Prior to srapping, each tank will be final cleansed using a high pressure water with a tank cleaning device. This process will involve cutting the ends of the tank followed by a final rinsing. Resulting rinse water will be run through a seperator with any hydrocarbons drummed for MDC diisposal and water discharged to the I.W. sewer.

Following cleaning each tank will be scrapped as follows :

Steel Tanks : The tank will be cut into approximately 4'x4' pieces for transportation and disposal by Geo Environmental Services, Inc.

Disposal - Liquid :

As discussed above there exists the possibility of disposing of two liquid components; hydrocarbons and water. Upon recovery of any hydrocarbon the meterial will be drummed and loaded on MDC vehicles for disposal by MDC. Respective to specifications, water will be discharged to the MDC Industrial Waste (I.W.) sewer.

Transportation - Solids :

Should contaminated soil be encountered, transportation to and disposal at PDC of Peoria, Illinois is planned. Such contaminated soil will be loaded directly on licensed transport vehicles and transported to PDC. Prior to transport appropriate tests (i.e., Flash Point and Paint Filter Test) will be performed to assure PDC acceptance and the trailer will be tarped prior to leaving MDC facilities.

Sampling :

Frequent air samples will be taken using a combustible gas meter, an oxygen indicating meter or a photoionization detector to both monitor the work environment and the excavated soil.

Tank pit samples will be collected in accordance with EPA - 600/4-83-040 methods.

Analysis :

Analysis will be conducted in accordance with standard SW -846 methods.

Demobilization :

Upon job completion a final site review will be conducted and all equipment will be removed from the site.

H. COMMUNICATION PROCEDURES

Personnel within the Exclusion Area shall remain in constant communication or within sight of the Safety Coordinator or his designee.

Should evacuation be required, all personnel will be notified and the area will be evacuated pending required action.

I. DECONTAMINATION PROCEDURES

Personnel and equipment leaving the job site shall be appropriately decontaminated. The standard Level D decontamination protocol shall be used with the following decontamination stations :

Personnel Decontamination Procedures

Station 1 : Equipment Drop

Deposit equipment used on-site (tools, sampling devices and containers, monitoring instruments, clipboards, etc.) on plastic drop cloths. Segregation at the drop reduces the possibility of cross contamination. During hot weather operations, a cool down station/rest area may be set up in this area. Material will be visibly inspected and cleaned as appropriate.

Station 2 : Outer Garment Removal

Remove outer boots and gloves. Deposit in container with plastic liner. If leaving the site or at the end of the day, all tyvec outer clothing shall be deposited into the disposal container provided.

Station 3 : Wash Area

An area will be set up which will have wash basins available for site personnel to wash hands and face before leaving the site or consuming food. In addition, a boot wash area, using three basins will be set up near the equipment decontamination area for washing soil-caked boots. Follow the hand tool decontamination procedure for cleaning boots.

It is advised that personnel should shower as soon as they arrive home.

Equipment Decontamination Procedures

Hand Tools :

All hand tools which come in contact with impacted soil will be decontaminated at the end of each working day. Decontamination will include washing tools in a mixture of water and detergent and rinsing. A decontamination system involving three wash basins will be used to clean hand tools. The first bucket will contain the water and detergent solution. The second and third buckets will contain only water. The procedure is as follows :

- Thoroughly wash hand tool with paper towels;
- Rinse tool in first water bucket and rinse again in second bucket;
- Thoroughly dry hand tool with paper towels;
- Dispose of paper towels in on-site dumpster; and
- Retain water/detergent solution for subsequent disposal.

Heavy Equipment :

Heavy equipment which may become contaminated with impacted soils will be cleaned prior to removal from the decontamination reduction zone. Cleaning may include washing the equipment using a procedure and containment to assure compliance with MDC's Foreign Object Debris (FOD) program. Any rinsing will be contained for seperation and disposal per specifications.

J. SITE HEALTH AND SAFETY

1. The designated Safety Coordinator is directly responsible for safety recommendations on-site.

2. Emergency Medical Care

Certain first aid equipment including the following items will be on-site:

First Aid Kit
Emergency Eye Wash
Fire Extinguishers

3. Emergency Support

Should additional assistance be required, the following emergency contacts are to be contacted as appropriate :

McDonnell Douglas Emergency Department

phone : 911

Missouri Department of Natural Resources

phone : 314-822-0101
314-634-2436

National Response Center

phone : 1-800-424-8802

Chemtrec

phone : 1-800-424-9300

4. Environmental Monitoring

The following environmental monitoring instruments may be used on-site :

Combustible Gas Indicator
Oxygen Monitor
Photoionization Detector

5. Emergency Procedures

Emergency planning meetings will be conducted prior to specific activities. Specific emergency procedures will be discussed relative to scheduled activities.

K. SPECIFIC PRECAUTIONS

Specific precautions mmust be considered during excavation, cleaning, and scrapping. Should a potential emergency event occur, the following steps are to be taken :

1. Immediately stop activities.
2. Evacuate the work area.
3. Notify the Safety Coordinator for determination of appropriate personal protective equipment and monitoring protocols.
4. In conjunction with the Safety Coordinator, the Job Superintendent, and the MDC Engineer, plan specific emergency activities.
5. Fully document the event.

L. OSHA CONSTRUCTION SAFETY GUIDELINES

OSHA guidelines relative to construction safety are herein incorporated by reference.

ATTACHMENT A

McDONNELL DOUGLAS

CONFINED SPACE ENTRY PROCEDURES

SUBJECT: CONFINED SPACE ENTRY PROCEDURE

A. PURPOSE:

This section outlines and explains the safety procedure to be followed when employees enter and work in confined spaces.

B. APPLICABLE TO:

Supervisors of employees entering confined spaces, all employees required to enter and work in confined spaces, and those serving as an attendant with others entering confined spaces. This procedure also applies to contractors and employees of contractors performing work in confined spaces.

C. DEFINITIONS:

1. There are various types of a confined spaces. The OSHA Standard (1910.146) for a confined space identifies the following characteristics:

   a. Contains an actually or potentially hazardous atmosphere; or

   b. Contains the potential for engulfment by loose particulate matter; or

   c. Has an internal configuration such that an entrant could be trapped by inwardly tapering walls or a floor which slopes or tapers to a smaller cross-section such that the entrant could not escape unaided; or

   d. Contains any or other recognized serious safety or health hazard.

   The criteria that make a space a confined space include the following:

   - The size, configuration, or location of the opening(s) prevent the employee from entering or exiting in a normal walking position, requiring the employee to use his or her hands to get through the portal;

   - The space is not designed for continuous human occupancy; and

   - Employee entries must actually take place.

C. DEFINITIONS: (Continued)

In addition, at least one or more of the following criteria must also exist:

- The size and number of the openings into the space, or the configuration of the space itself, restricts natural ventilation so that a flammable, toxic, or otherwise non-respirable atmosphere could accumulate; or
- The space itself, due to its size or shape, increases the likelihood of an entrant contacting a harmful energy source (chemical, electrical, mechanical, or electromagnetic); or
- The space itself, due to its geometric shape or size, could trap an entrant and prevent an unaided escape; or
- The space contains particulate matter that may "bridge", adhering to the walls of the space in such a manner that it can fall on an employee or cause an employee to fall through it and become engulfed.

2. Confined Space Classifications:

a. Confined Space, Class "A"

A confined space that presents a situation that is immediately dangerous to life or health (IDLH). These include but are not limited to oxygen deficiency, explosive or flammable atmospheres, and/or concentrations of toxic substances.

b. Confined Space, Class "B"

A confined space that has the potential for causing injury and illness, if preventive measures are not used, but not immediately dangerous to life and health.

c. Confined Space, Class "C"

A confined space in which the potential hazard would not require any special modification of the work procedure.

D. THE HAZARDS THAT MAY BE ENCOUNTERED IN A CONFINED SPACE ARE:

1. Oxygen deficiency (less than 19.5% oxygen) either initially or gradually due to being consumed or displaced as a result of insufficient ventilation.

D. THE HAZARDS THAT MAY BE ENCOUNTERED IN A CONFINED SPACE ARE: (Continued)

2. Inert gases used to exclude oxygen such as nitrogen, helium, or argon.

3. Flammable or explosive liquids, dusts, gases and vapors.

4. Toxic dusts, fumes, smoke, mists, vapors, gases such as carbon monoxide, hydrogen sulfide.

5. Contact with eye and skin damaging or skin absorbable materials.

6. Start up of agitators, tumblers, crushers, mixing blades, rams, feed or screw conveyors.

7. Avalanche of falling objects (coal, ashes).

8. Opening of feed lines which introduce corrosive, hot, toxic, or flammable materials.

9. Electrical shock from plug-in equipment such as lights, tools, and instruments.

10. Temperature extremes.

11. Failure to use, or inappropriate use of respiratory protective equipment, rescue harnesses and life line, and failure to post rescue personnel.

E. GENERAL REQUIREMENTS FOR CONFINED SPACE ENTRY:

The following regulations will be observed when work performed requires entry into any confined space, regardless of classification.

1. All confined spaces (excluding fuel cells) shall be identified with a label which states "DANGER CONFINED SPACE, ENTRY BY PERMIT ONLY". Also, a letter A, B, or C will indicate the confined space classification. Fuel cells in production areas shall be identified by signs on stanchions.

2. Consult the flow chart on [page 5] to determine who to contact for each type of confined space entry.

3. A Confined Space Entry Permit, MAC Form #4142 shall be completed by Occupational Safety & Health Services or a designated representative. The completed permit shall be posted at or near the entrance to the confined space. When wet fuel cells are entered, a Fuel Cell Entry Permit must be completed in accordance with P.S. 17020.

E. GENERAL REQUIREMENTS FOR CONFINED SPACE ENTRY: (Continued)

4. The number of employees permitted to enter a confined space shall be kept to a minimum and shall be listed on the Confined Space Entry Permit.

5. The entry permit will be good for one shift only. A new permit will be issued prior to work commencing on the following shift, except in those cases where a job duration permit is issued by the OSHS Department. Only those operations, processes or procedures that are specifically authorized by the job duration permit will be allowed.

6. Employees shall be made familiar with the nature of the confined space prior to entry (i.e., harmful or flammable properties).

7. All personal protective equipment and tools indicated per the Confined Space Entry Permit (or Fuel Cell Entry Permit) shall be used.

8. If contaminants in the confined space can cause eye or skin irritation or can be absorbed through the skin, employees entering the confined space shall wear suitable protective equipment and clothing.

9. Ignition sources shall not be permitted near flammable materials within confined spaces. If welding operations are to be permitted, a HOT WORK PERMIT shall be obtained.

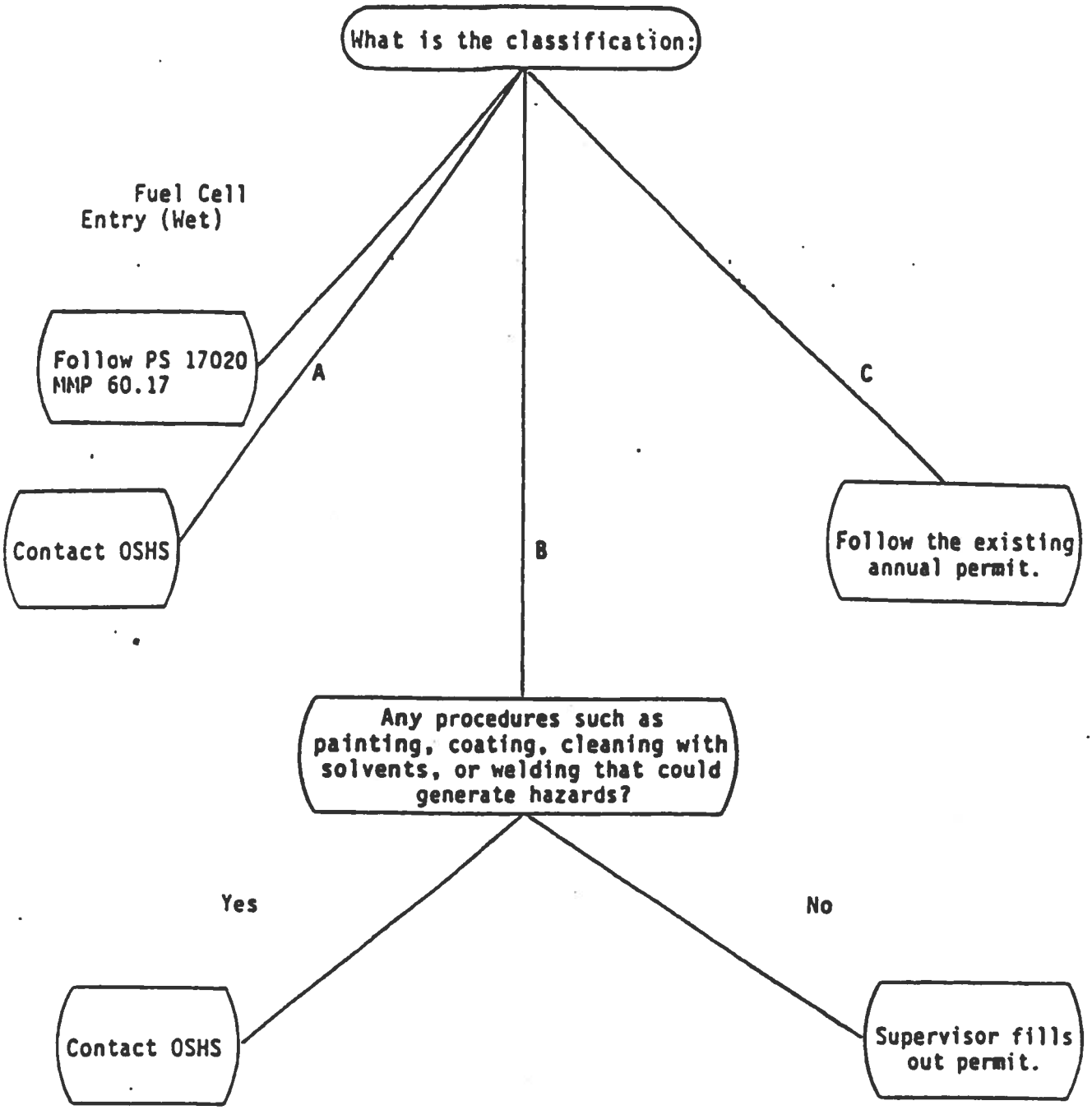
10. When welding or cutting is performed in confined spaces, the gas cylinders or welding machine shall be located outside the confined space.

11. When welding is suspended for any period of time such as lunch, overnight, or break, the torches or rod holders shall be removed from the confined space and main cylinder valve turned off and the welder disconnected.

12. Employees and supervisors of those employees, allowed to work in confined spaces shall receive confined space entry training from the Occupational Safety & Health Services Department. This training shall include:

    a. Emergency Entry & Exit Procedure
    b. Use of Respirators
    c. Lockout Procedure
    d. Safety & Equipment Use
    e. Rescue
    f. Permit
    g. Work Practices

E. GENERAL REQUIREMENTS FOR CONFINED SPACE ENTRY: (Continued)



E. GENERAL REQUIREMENTS FOR CONFINED SPACE ENTRY: (Continued)

13. Employees entering a confined space requiring the use of respirators shall conform to the MDC-St. Louis Respiratory Protection Requirements.

14. Supervisors of employees entering confined spaces shall be trained in all aspects of this procedure.

15. Fire Services shall likewise be trained in confined space entry and shall annually practice rescue procedures of removing victims from such spaces. In addition, designated Fire Services personnel shall be trained in basic first aid and CPR so that at least one member of each rescue team is certified (i.e., officers).

F. ENTRY PROCEDURES:

In addition to these general requirements there are specific procedures which apply to each confined space classification.

1. Class A

a. Contact your area Occupational Safety & Health Services representative before entering any Class A confined space. They will conduct the proper tests and complete the entry permit.

b. The tests conducted by the Occupational Safety & Health Services Department shall determine the presence of respirable air (non-toxic), non-explosive atmosphere, (less than 10% of the LEL), and adequate oxygen (at least 19.5%).

c. Whenever possible, remote testing shall be performed. If this is not possible, the confined space shall not be entered for testing without wearing an airline respirator, 5 minute emergency escape bottle and having an attendant present.

d. Many operations require periodic or continuous monitoring as the work progresses to ensure that safe conditions are maintained. The frequency of testing and the types to be conducted depend on prevailing conditions in the confined space and the nature of the operations.

e. Before entering a Class A confined space, the contents should be removed. Clean out doors and access openings shall be opened, commensurate with clean-out and ventilation requirements. This should be done as far in advance as possible to allow natural ventilation. Chemical storage tanks should be drained, flushed, and ventilated before entering.

F. ENTRY PROCEDURES: (Continued)

f. Precautions should be taken to prevent the creation of a non-respirable or explosive atmosphere in the confined space during the time the employees are inside (introduction of flammable or toxic cleaning materials or oxygen displacing gases or fumes). Burning and welding in confined spaces will normally require local exhaust ventilation. All employees shall be immediately withdrawn from the space if conditions external to the space could pose a hazard to the entrants. The original permit is then void and re-entry shall not be permitted until the confined space has been re-evaluated by Occupational Safety & Health Services.

g. In the case of entry into an actual or potential IDLH atmosphere, only NIOSH approved positive pressure atmosphere supplied breathing apparatus, or positive pressure airline respirators equipped with a 5 minute emergency escape bottle, and any other equipment necessary for rescue purposes shall be available at the point of entry.

h. If the use of life lines are required, the excess line must be secured to a lifting device or to an anchor point located outside the entry portal to prevent it from falling or being pulled into the space.

i. All process lines containing toxic or potentially hazardous substances leading to the confined space shall be blanked or double-blocked and bled.

j. If the start-up of electrical, steam, hydraulic pneumatics or other mechanical equipment could cause injury, the equipment shall be secured by lock out. (Ref. SMP 890-70-3 or Safety Manual Section 10.2)

k. A Confined Space Entry Kit, airline respirators, with emergency escape bottles, and any other equipment required per the Confined Space Entry Permit, must be picked up from the tool crib and brought to the work site.

l. Explosion-proof lights and electrical equipment shall be used. Plug-in equipment shall be equipped with a ground fault interrupt (GFI) device.

m. An attendant wearing the proper personal protective equipment (as indicated by the permit) and knowledgeable in the confined space entry emergency procedure shall be stationed outside the entrance to the confined space and maintain communications (visual, voice, or signal line) with the employee inside.

F. ENTRY PROCEDURES: (Continued)

n. Employees must be trained to exit from the confined space as rapidly as they can without help (self rescue) whenever an order to evacuate is given by the attendant, whenever an automatic evacuation alarm is activated, or whenever employees recognize the warning signs of exposure to substances whose presence in the confined space is known or expected.

o. In the event of an emergency, the attendant shall contact Fire Services at 911 and then attempt to rescue the person, using non-entry techniques.

2. Class B

a. If the procedure being conducted in the Class B confined space could, in itself, create a hazard (e.g., painting, cutting, welding, or cleaning with solvents, etc.) Occupational Safety & Health Services shall be contacted. In all other cases, the supervisor shall fill out the permit.

b. All Class B confined spaces shall be ventilated before employees are allowed to enter. If indicated by the Occupational Safety & Health Services representative or their designee, the area shall be cleaned and/or purged.

c. Precautions should be taken to prevent the creation of a non-respirable or explosive atmosphere in the confined space during the time the employees are inside (introduction of flammable or toxic cleaning materials or oxygen burning displacing gases or fumes). Welding in confined spaces will normally require local exhaust ventilation and a HOT WORK PERMIT. All employees shall be immediately withdrawn from the space if conditions external to the space could pose a hazard to the entrants. The original permit is then void and re-entry shall not be permitted until the confined space has been re-evaluated by Occupational Safety & Health Services.

d. In the case of entry into an actual or potential IDLH atmosphere, only NIOSH approved positive pressure atmosphere supplied breathing apparatus or positive pressure airline respirators equipped with a 5-minute emergency escape bottle, and any other equipment necessary for rescue purposes shall be available at the point of entry.

e. If the use of life lines are required, the excess line must be secured to a lifting device or to an anchor point located outside of the entry portal to prevent it from falling or being pulled into the space.

F. ENTRY PROCEDURES: (Continued)

f. All process lines containing toxic or potentially hazardous substances leading to the confined space shall be blanked or double-blocked and bled.

g. If the start-up of electrical, steam, hydraulic pneumatics or other mechanical equipment could cause injury, the equipment shall be secured by locking out. (Ref. SMP 890-70-3 or Safety Manual Section 10.2.)

h. A Confined Space Entry Kit, airline respirators; with emergency escape bottles and any other equipment required per the Confined Space Entry Permit, must be picked up from the tool crib and brought to the work site.

i. Explosion-proof lights and electrical equipment shall be used. Plug-in equipment shall be equipped with a ground fault interrupt device.

j. An attendant wearing the proper personal protective equipment (as indicated by the permit) and knowledgeable in the confined space entry emergency procedure shall be stationed outside the entrance to the confined space and maintain communications (visual, voice, or signal line) with the employee inside.

k. Employees must be trained to exit from the confined space as rapidly as they can without help (self rescue) whenever an order to evacuate is given by the attendant, whenever an automatic evacuation alarm is activated, or whenever employees recognize the warning signs of exposure to substances whose presence in the confined space is known or expected.

l. In the event of an emergency, the attendant shall contact Fire Services at 911 and then attempt to rescue the person, using non-entry techniques.

3. Class C

a. All Class C confined spaces shall be assigned an annual permit. This permit must be followed each time an employee enters the confined space. For the most part, Class C confined spaces are entered by Fire Services and Maintenance personnel.

b. This type of confined space requires no modification of the work process. Entry does not require an airline respirator, harness or life line. In addition, an attendant is not required to be stationed outside. However, entry into pits or manholes (street type openings) shall have conspicuous barriers placed around the opening prior to entry.

F. ENTRY PROCEDURES: (Continued)

c. Non-attendant entry is permitted provided that:

(i) The entrant takes no materials into the space that could cause a hazard;

(ii) The entrant will not perform work that could cause a hazard in the space; and

(iii) The specific instructions outlined in the annual permit are followed.

4. Fuel Cell Entry

a. When entering into a previously fueled compartment (including both fuel cells and integral fuel cells) P.S. 17020 and NMP 60.17 shall be followed. The use of NAC Form 4135 is mandatory for this purpose.

b. Entry into a dry fuel cell is considered entry into a Class B confined space. If the procedure being conducted in the Class B confined space could, in itself, create a hazard (e.g., painting cleaning, gluing foam, etc.) Occupational Safety & Health Services shall be contacted. In other cases, a job duration permit issued by the OSHS Department may be used. The entry procedures for a Class B confined space shall be followed when entering any dry fuel cell.

G. RESPONSIBILITY:

1. The supervisor of employees requiring entry into a confined space shall obtain respirator training for these employees.

2. The supervisor of employees requiring confined space entry shall obtain safety and other equipment required for the job prior to entry.

3. Occupational Safety and Health Services or their designee shall conduct the proper tests prior to allowing entry, and establish safety equipment that will be required.

4. Occupational Safety and Health Services or their designee shall evaluate the adequacy of safety measures established (for example, lock-out, blanks, ventilation, protective equipment, etc.). Compliance to established health/safety requirements must be met prior to confined space entry.

G. RESPONSIBILITY: (Continued)

5. The Occupational Safety and Health Services representative may, in some cases, slightly modify the entry procedure outlined in this written program. This would be done in rare cases and only after a thorough investigation of the hazards involved in the particular confined space.

6. The supervisor shall contact the proper parties by consulting the flow chart on [page 5] and ensure that the permit is properly filled out.

7. If hot work is to be performed in conjunction with the confined space entry, the supervisor shall obtain a HOT WORK PERMIT.

8. Supervision shall check operations at intervals to determine that safety requirements are being followed.

9. If conditions change inside the confined space during progress of work, employees shall exit the space and contact supervision for instruction.

CONFINED SPACE ENTRY PERMIT

LOCATION | CLASS

UNAUTHORIZED ENTRY IS FORBIDDEN. NAMES OF EMPLOYEES APPROVED FOR ENTRY. NO OTHERS MAY ENTER THE CONFINED SPACE EXCEPT IN AN EMERGENCY

EMPLOYEE | EMPLOYEE NO. | DEPT | SHIFT

SUPERVISOR'S SIGNATURE | SAFETY/HEALTH REPRESENTATIVE OR DESIGNEE

CONFINED SPACE INSPECTION PRIOR TO AUTHORIZED ENTRY

ITEM	YES	NO	COMMENTS
• ARE ALL LINES DISCONNECTED OR BLANKED OFF?			
• IS POWER LOCKED AND TAGGED OUT?			
• HAS CONFINED SPACE BEEN PROPERLY VENTED?			
• IS OXYGEN CONCENTRATION AT LEAST 19.5 %?			
• ARE TOXIC AGENTS/EXPLOSIVE GASES AT SAFE LEVEL?			
• HAVE THOSE ENTERING BEEN TOLD OF SAFETY/HEALTH PROCEDURES?			
• IS FIRE EXTINGUISHER/RESCUE EQUIPMENT AVAILABLE?			
• ARE EMPLOYEES WEARING PROPER PROTECTIVE GEAR OR EQUIPMENT?			
• HAS A WELDING PERMIT BEEN ISSUED?			
• IS ACCESS ADEQUATE AND CLEAR?			
• HAS THE OBSERVER BEEN INSTRUCTED ON EMERGENCY ACTIONS?			

ATMOSPHERIC MONITORING EQUIPMENT UTILIZED (MODEL NO., SERIAL NO., AND CALIBRATION DATE)

HAVE THE PRE-ENTRY REQUIREMENTS BEEN COMPLETED? ☐ YES ☐ NO SIGNED

REQUIRED PERSONAL PROTECTIVE EQUIPMENT UTILIZED (e.g., SELF CONTAINED BREATHING APPARATUS, HARDHATS, GOGGLES, GLOVES, BOOTS, ACID SUITS, Etc.)

COMMENTS OR SPECIAL INSTRUCTIONS:

EMERGENCY PHONE NUMBER 911

THIS PERMIT EXPIRES: DATE TIME

SUPERVISOR: WHEN THIS CONFINED SPACE ENTRY WORK IS COMPLETED, RETURN ALL POSTED PERMITS TO THE OCCUPATIONAL SAFETY AND HEALTH SERVICES DEPARTMENT, 064

INDICATE HERE THE TIME AND DATE THE WORK WAS COMPLETED.

MAC 4142 (REV 27 MAR 87)

ATTACHMENT B

SAFETY PLAN REVIEW

SAFETY PLAN REVIEW

All site personnel have read the above plan and are familiar with the provisions.

DATE	NAME	SIGNATURE	COMPANY

APPENDIX B

CERTIFICATE OF TRAINING

ENVIRONMENTAL Training Center

CERTIFIES THAT

ELLIS A. SHIBLEE

has successfully completed

THE EIGHT (8) HOUR REFRESHER COURSE FOR

HAZARDOUS WASTE SITE OPERATIONS

SSN 516-96-7838
Course date NOVEMBER 23, 1992
Requirement 29CFR1910.120
Certificate No. 7-SL112392-08
Training Site: 1988 INNERBELT BUSINESS CTR. DR.
ST. LOUIS, MISSOURI 63114-5760
TELEPHONE 314/428-7020

Instructor

Director, Training

John Mathes & Associates, Inc.

CERTIFICATE OF PARTICIPATION

Awarded to

EDWARD J. HEET

For attending and demonstrating satisfactory completion of a professional development course entitled:

Air Monitoring Instrumentation Application and Field Use

C J Hoyt
COURSE INSTRUCTOR

December 27, 1988
COURSE DATE(S)

mathes

BR Thomas, CIH
COURSE DIRECTOR

L. Allen Boyce
TRAINING ADMINISTRATOR

30 Kenn Drive • Belleville, Illinois 62223 • Mobile - 618-578-9513 / Res. - 618-235-9400

J. Z. Disposal, Inc.

Certificate of Training

Awarded to

Kendrick M. Cooper

For the Successful Completion of a 40 Hour
Hazardous Materials Handling Course

Issued this First day of August, 19 90

Michael D. Gill
Health & Safety Office

President

"Imagineering a Cleaner World"

Riedel Environmental Services Inc.

Certificate of Completion

presented to

ED BEET

in recognition of satisfactory completion
of the course of instruction entitled

HAZARDOUS MATERIALS HANDLING AND RESPONSE

JULY 13 - 17, 1987

Date(s) of Instruction

Instructor

ENVIRONMENTAL EXCAVATORS, INC.
Built on Honesty and Integrity
30 Kenn Drive • Belleville, Illinois 62223 • Mobile 618-978-9513 / Res. 618-235-9400

APPENDIX C

CHAIN OF CUSTODY DOCUMENTATION

GEO ENVIRONMENTAL SERVICES, INC.
8515 DELMAR, SUITE 212
ST. LOUIS, MO 63124
314-991-2060 FAX 314-991-4134

FIELD SHEET AND CHAIN OF CUSTODY RECORD

COLLECTOR'S NAME AND AFFILIATION (PLEASE PRINT)
ELLIS A. SIBLEE, GES
HARLAN BENGTSEN, GES

DESCRIPTION OF SHIPMENT
NUMBER OF SAMPLES ▶ 3
NUMBER OF CONTAINERS ▶ 3x2x4 oz.
HOW SEALED ▶ Electric Tape

PROJECT OR MAJOR FIELD CODE / SITE CODE

SAMPLE NUMBER	SAMPLE DESCRIPTION	COLLECTED DATE	COLLECTED TIME	ANALYSES REQUESTED	FIELD ANALYSES	SITE CODE
#1	Tank Bottom 13.0' Dark STIFF CLAY (BROWN)	12/31	9:00A	VOA SCAN (INCLUDING BTEX), TPH 418.1, Flash Point, 8240 PH, PCB's, EP Tox Lead, Oil and Grease.	NONE	01102292
#2	Down Gradient Wall 6.5' E.S. ~~BROWN~~ STIFF CLAY (Black)	12/31	9:00A	VOA SCAN (INCLUDING BTEX), TPH 418.1, Flash Point, PH, PCB's, EP TOX Lead, Oil and Grease	NONE	
#3	CENTRE OF Fuel Line Dark STIFF CLAY (Black)	12/31	9:00A	VOA SCAN (INCLUDING BTEX), TPH, Flash Point, PH, PCB's, EP TOX Lead, Oil and Grease	NONE	

CHAIN OF CUSTODY RECORD

RELINQUISHED BY		RECEIVED BY		DATE	TIME	IF SHIPPED	DELIVERED DATE	DELIVERED TIME	PICKED UP DATE	PICKED UP TIME
Ellis A. Sibblee	☐ SEALED ☒ SHIPPED		☐ SEALED			CARRIER FEDERAL EXPRESS #1503-2043-7				
	☐ SEALED ☐ SHIPPED		☐ SEALED	1/4/92	10:15	CARRIER				
	☐ SEALED ☐ SHIPPED		☐ SEALED			CARRIER				

CasChem Laboratories Incorporated
1712 - 11th Street N.E.
Canton, OH 44705

CHAIN OF CUSTODY FORM

216-588-TEST
800-800-6052
(FAX) 216-588-8412

Project # 01102292 | Project Name FRDWB/MCDDUST

Samplers (Signature): Ellis A. Dibblee

Customer Name and Address:
GeoEnvironmental Services, Inc.
8515 Delmar, Suite 212, St. Louis, MO 63124

Sta. #	Date	Time	Comp	Grab	Station Location	No. of Containers	VOA SCAN (INCLUDING BTEX) EPA 8240	TPH EPA 418.1	PCB's	EP TOX LEAD	FLASH POINT	Oil and Grease	PH	Remarks	Lab #
1	12/31	9:00A		✓	TANK BOTTOM -13.0'	2x40Z	✓	✓	✓	✓	✓	✓	✓	DARK STIFF CLAY (BROWN)	9301011
2	12/31	9:00A		✓	DOWN GRADIENT WALL - 6.5'	2x4 OZ.	✓	✓	✓	✓	✓	✓	✓	~~BROWN~~ E.S STIFF CLAY BLACK	9301012
3	12/31	9:00A		✓	CENTRE of FUEL LINE	2x4 OZ.	✓	✓	✓	✓	✓	✓	✓	DARK STIFF CLAY (BLACK)	9301013

Relinquished by: (Sig.)	Date/Time	Received by: (Sig.)	Relinquished by: (Sig.)	Date/Time	Received by: (Sig.)
Ellis A. Dibblee	12/31/92				FENEK
Relinquished by: (Sig.)	Date/Time	Received by: (Sig.)	Relinquished by: (Sig.)	Date/Time	Received by: (Sig.)
FENEK	1/1/92 1615				
Relinquished by: (Sig.)	Date/Time	Received for Lab by:	Date/Time	Sample Containers Cleaned by:	Date
Shipper's Date				Containers & Mailers Assembled by:	Date
12/31/92				GES	12/31/92

GEO
ENVIRONMENTAL
SERVICES, INC.

P.I.D RENTAL CONTRACT

REIS ENVIRONMENTAL

INSTRUMENT RENTAL AGREEMENT

OHA INSTRUMENTS

Renting Company (Customer)

Bill To: Geo Environmental Services, Inc.
8515 Delmar, Suite 212
St. Louis MO 63124
FAX 991-4134 PH 991-2060

Ship To: PICK UP

Ellis Shiblee/ Harlen Benson

Customer# 10300 Order # 82150 Agreement# 81601

Payment Terms Company Check 10300 PO # Verbal FOB: Shipping Point

Qty	Part #	Equipment Rented Description	Rental Rate $ per	Start Date	Scheduled Return	Actual Return
1	99996003	RENTAL 580S, S/N 580S31119	105.00 DAY	~~12/28/92~~ 12/29/92	~~12/29/92~~ 12/30/92	
		ONE DAY RENTAL				
		ADDITIONAL DAYS AT $75.00 / DAY				
		CHECK TOTAL $110.01				
		DEPOSIT $500.00				

Ship/P.U. From Location #1 St. Louis
Rented By C. Boehm

Customer agrees to return:
Freight prepaid to:

Reis Environmental, Inc.
Rental Department
11022 Linpage Pl.
St. Louis, MO 63132

Please read carefully the terms and conditions on both sides of this Rental Agreement before signing.

I warrant that I am a principal of, or authorized by a principal of the Renting Company and therefore may sign this Agreement.

AGREED: Ellis A. Shiblee Date: 12/28/92
Customer Representative (Signature)
(FAX#314-426-3714)

Customer Representative (Print Name)

1. INSPECTION. Customer acknowledges that he/she has had an opportunity to personally inspect the rental equipment, and finds it suitable for his/her needs and in good condition, and that he/she understands its proper use. Customer further acknowledges his/her duty to inspect the equipment prior to use and notify Reis Environmental, Inc., of any defects.
2. REPLACEMENT OF MALFUNCTIONING EQUIPMENT. If the equipment becomes unsafe or in disrepair as a result of normal use, Customer agrees to discontinue use and notify Reis Environmental, Inc., who will replace the equipment with similar equipment in good working order, if available. Reis Environmental, Inc., is not responsible for any incidental or consequential damages caused by delays or otherwise.
3. WARRANTIES: THERE ARE NO WARRANTIES OF MERCHANTABILITY OR FITNESS, EITHER EXPRESSED OR IMPLIED. Each piece of equipment has been thoroughly inspected and calibrated to manufacturer's specifications. However, there is no warranty that this equipment is suited for Customers intended use, or that it is free from defects. Customer's sole remedy for any failure or defect in the equipment shall be the termination of the rental charges at the time of the failure, provided that such failure is reported to Reis and the equipment is returned or in transit to Reis Environmental, Inc. within twenty-four hours after such failure. Reis Environmental, Inc., shall not be responsible for any loss, damage, or injury to customer or customer's property, including incidental, special or consequential damages, in any way connected with the operation, use, defect in or failure of the equipment.
4. HOLD HARMLESS AGREEMENT. Customer agrees to assume the risks of, and hold Reis Environmental, Inc., harmless for property damage or personal injury arising out of or pertaining to negligence related to possession or use of the equipment rented under this agreement.
5. PROHIBITED USE AND CUSTOMER'S LIABILITY FOR MISUSE OF EQUIPMENT. Use of the equipment in the following circumstances is prohibited and constitutes a breach of this agreement: (a) Use for illegal purpose or in an illegal manner, (b) Use when the equipment is in bad repair or is unsafe, (c) Improper, unintended use or misuse, (d) Use by anyone other than the Customer or Customer's employees without the written consent of Reis Environmental, Inc. Customer shall not abuse, harm or misuse the equipment. Customer shall not permit any repairs to be made or lien to be placed upon the equipment without Reis Environmental, Inc.'s written consent. In the event of any accident or casualty resulting in bodily injury or property damage arising out of customer's use and hiring of said equipment, customer agrees to accept all responsibility therefore and shall hold Reis Environmental, Inc., harmless from any claim or action arising therefrom. Customer shall furnish Reis Environmental, Inc., with a complete report of any accident involving said equipment, including names and addresses of witnesses. Unless otherwise specified herein, in case of the loss or destruction of any part of the equipment, or of loss or possession thereof, or inability to return the same to Reis Environmental, Inc., for any reason whatsoever, customer agrees to pay Reis Environmental, Inc. the fair market value of said equipment.
6. ASSIGNMENTS, SUBLEASES AND LOANS OF EQUIPMENT. Reis Environmental, Inc., may assign its rights under this contract without Customer's consent but will remain bound by all obligations herein. Customer may not sublease or loan the equipment without Reis Environmental, Inc.'s written consent. Any purported assignment by Customer is void.
7. LATE RETURN. Customer agrees to return the rented equipment during Reis Environmental, Inc.'s regular business hours upon termination of the scheduled rental period. If not timely returned, Customer agrees to pay an additional charge of 1/8th of the equivalent daily rate for each hour the equipment is retained beyond the expiration of the scheduled rental period based upon a maximum of 8 chargeable hours per day.
8. DECONTAMINATION AGREEMENT. Customer agrees that all rental equipment from Reis Environmental, Inc., shall be completely decontaminated at owner's expense prior to the return of the equipment to Reis Environmental, Inc. This includes but is not limited to: interior and exterior decontamination with all filters removed and disposed of at the work site; exterior wiped down, cleaned and dried. Customer understands that failure to properly decontaminate returned equipment will result in additional charges for decontamination.
9. DAMAGE AND LOSS PROVISION. Customer assumes the entire risk of loss with respect to this equipment from damage, theft, mysterious disappearance, whether or not due to the fault of the Customer, and Customer shall pay Reis Environmental, Inc., for accrued rental charges plus fair market value of lost equipment or repair cost for damaged equipment within 30 days of receipt of invoice. Customer agrees to immediately and timely inform Reis Environmental, Inc., of all losses or damage, and provide Reis Environmental, Inc., with the name of Customer's Insurance agent, a copy of the police report, and complete information concerning insurance coverage for said loss or damage. Customer shall exercise all rights available to Customer under its insurance coverage, and Customer further agrees to assign any and all proceeds from insurance coverage to Reis Environmental, Inc. to satisfy its obligations under this agreement.
10. TIME OF PAYMENT. Customer agrees that payment is due and payable within the payment terms of the agreement and carrying charge of 1.5% per month (Annual Rate of 18%) will be due on all overdue accounts.
11. COLLECTION COST. Customer agrees to pay all reasonable collection, attorney's and court fees and other expenses involved in the collection of the charges of enforcement of Reis Environmental, Inc., rights under this agreement whether or not suit is commenced.
12. REPOSSESSION. Upon failure to pay rent or other breach of this contract by Renting company, Reis Environmental, Inc. may terminate this contract and take possession of and remove said equipment from wherever it may be, without prejudice to any other remedies or claims which Reis Environmental, Inc. might otherwise possess by law or pursuant to this rental equipment, for rental, damage or loss charges and collection charges including court costs and attorney's fees. Reis Environmental, Inc. and his agents shall not be liable for any claims for damage or trespass arising out of the removal of said equipment.
13. DISCLAIMER OF AGENCY. Customer acknowledges that he/she is not the agent of Reis Environmental, Inc. for any purpose.
14. DISCLAIMER OF MANUFACTURE. Customer agrees that Reis Environmental, Inc. is not the manufacturer of the rental equipment.
15. COMPETENCY. Customer agrees that all rented equipment will be used and operated only by a person competent in its operation and further agrees to operate and maintain the equipment in accordance with instructions provided by Reis Environmental, Inc. and/or manufacturer instructions. Customer further agrees not to operate the equipment in a careless or negligent manner or while intoxicated or under the influence of drugs.
16. SEVERABILITY. The provisions of this agreement shall be severable so that the invalidity, unenforceability or waiver of any of the provisions shall not affect the remaining provisions.
17. INDEMNITY. Customer agrees to indemnify and reimburse Reis Environmental, Inc. for liabilities of Customer, Customer's agents or third parties arising out of the use of the equipment or a breach of this contract by Customer.

AGREED: Ellis A. Shirley Date: 12/28/92

Customer Representative (Signature)

Comments: _____

GEO ENVIRONMENTAL SERVICES, INC.

APPENDIX D

LABORATORY ANALYSIS REPORTS

CASCHEM LABORATORIES, INC.
1712 11TH STREET, N.E.
CANTON, OHIO 44705
Phone (216) 588-TEST FAX:(216) 588-8412

01/15/93

Laboratory Analysis Report

Client ID: 3016
Sample ID:01102292FRDWB/MCDUST
Sample Description:
#1 GRAB TANK BOTTOM 13'

GEO ENVIRONMENTAL SERVICES, INC.
8515 DELMAR, SUITE 212
ST.LOUIS MO 63124

Comment:

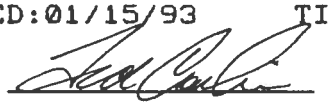
Purchase Order No.:

Date Sampled:12-31-92
Time Sampled:09:00

Date Received:01/04/93 Time Received:10:15

Lab Number	Test Description	Result	Unit	LOD	TEST DATE
9301011					
	VOLATILE ORGANICS (8240)		SEE	REPORT	01/14/93
	T.P.H.(9071,418.1) CALIB.12-19-92	<10	mg/kg	10 mg/kg	01/04/93
	P.C.B. ANALYSIS (8080)	<1	mg/kg	1.0 mg/kg	01/11/93
	T.C.L.P. EXTRACTION (1311) LEAD BELOW		GM USED=100	pH=8.62	01/05/93
	LEAD AS Pb (239.1)	<0.05	mg/l	0.05 mg/l	01/06/93
	IGNITABILITY (D-93-79)	>175	deg.F		01/06/93
	OIL AND GREASE (9071)	<100	mg/kg	100 mg/kg	01/07/93
	pH, LAB. (9045)	8.62	S.U.		01/06/93

DATE REPORTED:01/15/93 TIME REPORTED:10:45:16

REPORTED BY  (fax) (mail) phone

CASCHEM LABORATORIES, INC.

Customer: GEO ENVIRONMENTAL SERVICES, INC.

Lab No.: 9301011

Sample ID: 01102292FRDWB/ MCDUST

Sample Description: #1 GRAB TANK BOTTOM 13'

Comment:

Date Sampled: 12-31-92
Time Sampled: 09:00

GC/MS FOR VOLATILE ORGANICS
EPA METHOD NO. 8240

	COMPOUND	RESULTS (UG/KG)	PRACTICAL QUANTITATION LIMITS (UG/KG)
1.	ACETONE	ND	100
2.	BENZENE	ND	5
3.	BROMODICHLOROMETHANE	ND	5
4.	BROMOFORM	ND	5
5.	BROMOMETHANE	ND	10
6.	2-BUTANONE	ND	100
7.	CARBON DISULFIDE	ND	100
8.	CARBON TETRACHLORIDE	ND	5
9.	CHLOROBENZENE	ND	5
10.	CHLORODIBROMOMETHANE	ND	5
11.	CHLOROETHANE	ND	10
12.	CHLOROFORM	ND	5
13.	CHLOROMETHANE	ND	10
14.	DICHLORODIFLUOROMETHANE	ND	10
15.	1,1-DICHLOROETHANE	ND	5
16.	1,2-DICHLOROETHANE	ND	5
17.	1,1-DICHLOROETHENE	ND	5
18.	CIS-1,2-DICHLOROETHENE	ND	5
19.	TRANS-1,2-DICHLOROETHENE	ND	5
20.	1,2-DICHLOROPROPANE	ND	5
21.	CIS-1,3-DICHLOROPROPENE	ND	5
22.	TRANS-1,3-DICHLOROPROPENE	ND	5
23.	ETHYLBENZENE	ND	5
24.	2-HEXANONE	ND	50
25.	METHYLENE CHLORIDE	ND	5
26.	4-METHYL-2-PENTANONE	ND	50
27.	STYRENE	ND	5
28.	1,1,2,2,-TETRACHLOROETHANE	ND	5
29.	TETRACHLOROETHENE	ND	5
30.	TOLUENE	ND	5
31.	1,1,1-TRICHLOROETHANE	ND	5
32.	1,1,2-TRICHLOROETHANE	ND	5
33.	TRICHLOROETHENE	ND	5
34.	TRICHLOROFLUOROMETHANE	ND	10
35.	VINYL CHLORIDE	ND	10
36.	TOTAL XYLENES	ND	5
37.	1,2 DICHLOROBENZENE	ND	5
38.	1,3 DICHLOROBENZENE	ND	5
39.	1,4 DICHLOROBENZENE	ND	5

CASCHEM LABORATORIES, INC.
1712 11TH STREET, N.E.
CANTON, OHIO 44705

01/15/93

QUALITY CONTROL REPORT

Client ID: 3016
Lab Number: 9301011
Sample Description:
#1 GRAB TANK BOTTOM 13'

GEO ENVIRONMENTAL SERVICES, INC.
8515 DELMAR, SUITE 212
ST.LOUIS MO 63124

Comment:

Purchase Order No.:

	DUPLICATE ANALYSIS					MATRIX SPIKE RESULT				SURROGATE SPIKE RESULT			
Test	Result1	Units	Result2	Units	Average	Spike Amt	Units	Amt Found	Units	%Rec	Spike Amt	Unit	Amt Found	Unit	%Rec.
PH6		mg/kg		mg/kg		6.	mg/100	6.31	mg/100	105.17		ug		ug	
B1	< 0.05	mg/l	< 0.05	mg/l	< 0.05	4.	mg/l	3.7	mg/l	92.50		ug		ug	
AG+S	< 100.	mg/kg	< 100.	mg/kg	< 100.00		ug		ug			ug		ug	

CASCHEM LABORATORIES, INC.
1712 11TH STREET, N.E.
CANTON, OHIO 44705
Phone (216) 588-TEST FAX:(216) 588-8412

01/15/93

Laboratory Analysis Report

Client ID: 3016
Sample ID:01102292FRDWB/MCDUST
Sample Description:
#2 GRAB DOWN GRADIENT WALL 6.5'

GEO ENVIRONMENTAL SERVICES, INC.
8515 DELMAR, SUITE 212
ST.LOUIS MO 63124

Comment:

Purchase Order No.:

Date Sampled:12-31-92
Time Sampled:09:00

Date Received:01/04/93 Time Received:10:15

Lab Number	Test Description	Result	Unit	LOD	TEST DATE
9301012					
	VOLATILE ORGANICS (8240)		SEE	REPORT	01/14/93
	T.P.H.(9071,418.1) CALIB.12-19-92	<10	mg/kg	10 mg/kg	01/04/93
	P.C.B. ANALYSIS (8080)	<1	mg/kg	1.0 mg/kg	01/11/93
	T.C.L.P. EXTRACTION (1311) LEAD BELOW		GM USED=100	pH=8.85	01/05/93
	LEAD AS Pb (239.1)	<0.05	mg/l	0.05 mg/l	01/06/93
	IGNITABILITY (D-93-79)	>175	deg.F		01/06/93
	OIL AND GREASE (9071)	<100	mg/kg	100 mg/kg	01/07/93
	pH, LAB. (9045)	8.85	S.U.		01/06/93

DATE REPORTED:01/15/93 TIME REPORTED:10:45:54

REPORTED BY [signature] (fax) (mail) phone

CASCHEM LABORATORIES, INC.

Customer: GEO ENVIRONMENTAL SERVICES, INC.

Lab No.: 9301012

Sample ID: 01102292FRDWB/ MCDUST

Sample Description: #2 GRAB DOWN GRADIENT WALL 6.5'

Comment:

Date Sampled: 12-31-92

Time Sampled: 09:00

GC/MS FOR VOLATILE ORGANICS
EPA METHOD NO. 8240

	COMPOUND	RESULTS (UG/KG)	PRACTICAL QUANTITATION LIMITS (UG/KG)
1.	ACETONE	ND	100
2.	BENZENE	ND	5
3.	BROMODICHLOROMETHANE	ND	5
4.	BROMOFORM	ND	5
5.	BROMOMETHANE	ND	10
6.	2-BUTANONE	ND	100
7.	CARBON DISULFIDE	ND	100
8.	CARBON TETRACHLORIDE	ND	5
9.	CHLOROBENZENE	ND	5
10.	CHLORODIBROMOMETHANE	ND	5
11.	CHLOROETHANE	ND	10
12.	CHLOROFORM	ND	5
13.	CHLOROMETHANE	ND	10
14.	DICHLORODIFLUOROMETHANE	ND	10
15.	1,1-DICHLOROETHANE	ND	5
16.	1,2-DICHLOROETHANE	ND	5
17.	1,1-DICHLOROETHENE	ND	5
18.	CIS-1,2-DICHLOROETHENE	ND	5
19.	TRANS-1,2-DICHLOROETHENE	ND	5
20.	1,2-DICHLOROPROPANE	ND	5
21.	CIS-1,3-DICHLOROPROPENE	ND	5
22.	TRANS-1,3-DICHLOROPROPENE	ND	5
23.	ETHYLBENZENE	ND	5
24.	2-HEXANONE	ND	50
25.	METHYLENE CHLORIDE	ND	5
26.	4-METHYL-2-PENTANONE	ND	50
27.	STYRENE	ND	5
28.	1,1,2,2,-TETRACHLOROETHANE	ND	5
29.	TETRACHLOROETHENE	ND	5
30.	TOLUENE	ND	5
31.	1,1,1-TRICHLOROETHANE	ND	5
32.	1,1,2-TRICHLOROETHANE	ND	5
33.	TRICHLOROETHENE	ND	5
34.	TRICHLOROFLUOROMETHANE	ND	10
35.	VINYL CHLORIDE	ND	10
36.	TOTAL XYLENES	ND	5
37.	1,2 DICHLOROBENZENE	ND	5
38.	1,3 DICHLOROBENZENE	ND	5
39.	1,4 DICHLOROBENZENE	ND	5

CASCHEM LABORATORIES, INC.
1712 11TH STREET, N.E.
CANTON, OHIO 44705

01/15/93

QUALITY CONTROL REPORT

Client ID: 3016
Lab Number: 9301012
Sample Description:
#2 GRAB DOWN GRADIENT WALL 6.5'

GEO ENVIRONMENTAL SERVICES, INC.
8515 DELMAR, SUITE 212
ST.LOUIS MO 63124

Comment:

Purchase Order No.:

	DUPLICATE ANALYSIS				MATRIX SPIKE RESULT				SURROGATE SPIKE RESULT			
Test	Result1 Units	Result2 Units	Average	Spike Amt Units	Amt Found Units	%Rec	Spike Amt Unit	Amt Found Unit	%Rec.
H6	< 10.mg/kg	< 10.mg/kg	< 10.00	ug	ug		ug	ug	

CASCHEM LABORATORIES, INC.
1712 11TH STREET, N.E.
CANTON, OHIO 44705
Phone (216) 588-TEST FAX:(216) 588-8412

01/15/93

Laboratory Analysis Report

Client ID: 3016
Sample ID:01102292FRDWB/MCDUST
Sample Description:
#3 GRAB CENTER OF FILL LINE

GEO ENVIRONMENTAL SERVICES, INC.
8515 DELMAR, SUITE 212
ST.LOUIS MO 63124

Comment:

Purchase Order No.:

Date Sampled:12-31-92
Time Sampled:09:00

Date Received:01/04/93 Time Received:10:15

Lab Number	Test Description	Result	Unit	LOD	TEST DATE
9301013					
	VOLATILE ORGANICS (8240)		SEE	REPORT	01/14/93
	T.P.H.(9071,418.1) CAL1B.12-19-92	<10	mg/kg	10 mg/kg	01/04/93
	P.C.B. ANALYSIS (8080)	<1	mg/kg	1.0 mg/kg	01/11/93
	T.C.L.P. EXTRACTION (1311) LEAD BELOW		GM USED=100	pH=8.36	01/05/93
	LEAD AS Pb (239.1)	<0.05	mg/l	0.05 mg/l	01/06/93
	IGNITABILITY (D-93-79)	>175	deg.F		01/06/93
	OIL AND GREASE (9071)	<100	mg/kg	100 mg/kg	01/08/93
	pH, LAB. (9045)	8.36	S.U.		01/06/93

DATE REPORTED:01/15/93 TIME REPORTED:10:46:29

REPORTED BY [signature] (fax) (mail) phone

CASCHEM LABORATORIES, INC.

Customer: GEO ENVIRONMENTAL SERVICES, INC.

Lab No.: 9301013

Sample ID: 01102292FRDWB/ MCDUST

Sample Description: #3 GRAB CENTER OF FILL LINE

Comment:

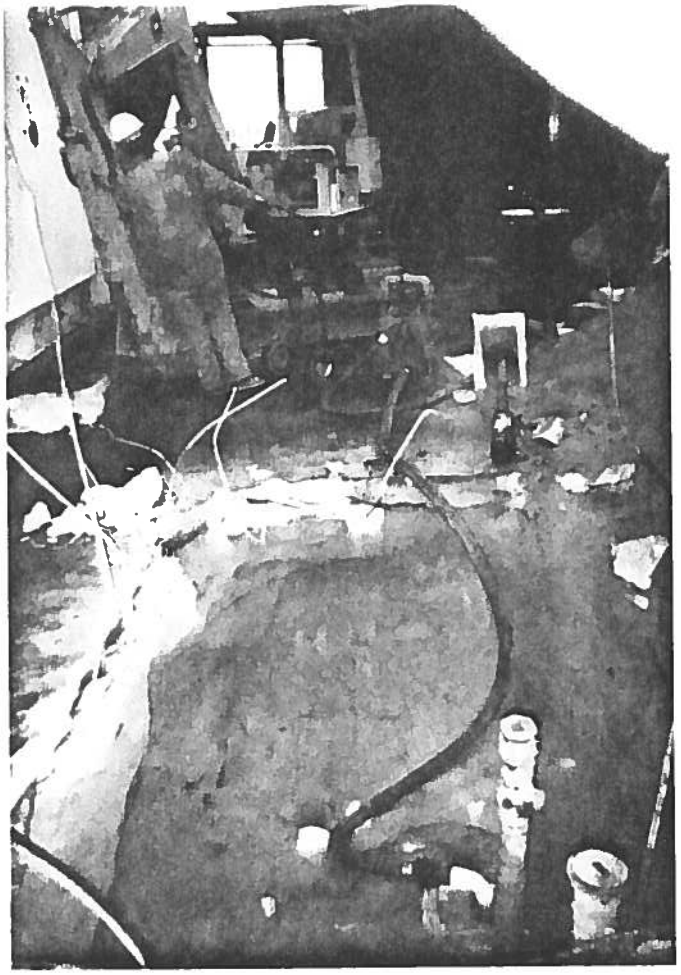
Date Sampled: 12-31-92
Time Sampled: 09:00

GC/MS FOR VOLATILE ORGANICS
EPA METHOD NO. 8240

	COMPOUND	RESULTS (UG/KG)	PRACTICAL QUANTITATION LIMITS (UG/KG)
1.	ACETONE	ND	100
2.	BENZENE	ND	5
3.	BROMODICHLOROMETHANE	ND	5
4.	BROMOFORM	ND	5
5.	BROMOMETHANE	ND	10
6.	2-BUTANONE	ND	100
7.	CARBON DISULFIDE	ND	100
8.	CARBON TETRACHLORIDE	ND	5
9.	CHLOROBENZENE	ND	5
10.	CHLORODIBROMOMETHANE	ND	5
11.	CHLOROETHANE	ND	10
12.	CHLOROFORM	ND	5
13.	CHLOROMETHANE	ND	10
14.	DICHLORODIFLUOROMETHANE	ND	10
15.	1,1-DICHLOROETHANE	ND	5
16.	1,2-DICHLOROETHANE	ND	5
17.	1,1-DICHLOROETHENE	ND	5
18.	CIS-1,2-DICHLOROETHENE	ND	5
19.	TRANS-1,2-DICHLOROETHENE	ND	5
20.	1,2-DICHLOROPROPANE	ND	5
21.	CIS-1,3-DICHLOROPROPENE	ND	5
22.	TRANS-1,3-DICHLOROPROPENE	ND	5
23.	ETHYLBENZENE	ND	5
24.	2-HEXANONE	ND	50
25.	METHYLENE CHLORIDE	ND	5
26.	4-METHYL-2-PENTANONE	ND	50
27.	STYRENE	ND	5
28.	1,1,2,2,-TETRACHLOROETHANE	ND	5
29.	TETRACHLOROETHENE	ND	5
30.	TOLUENE	ND	5
31.	1,1,1-TRICHLOROETHANE	ND	5
32.	1,1,2-TRICHLOROETHANE	ND	5
33.	TRICHLOROETHENE	ND	5
34.	TRICHLOROFLUOROMETHANE	ND	10
35.	VINYL CHLORIDE	ND	10
36.	TOTAL XYLENES	ND	5
37.	1,2 DICHLOROBENZENE	ND	5
38.	1,3 DICHLOROBENZENE	ND	5
39.	1,4 DICHLOROBENZENE	ND	5

APPENDIX E

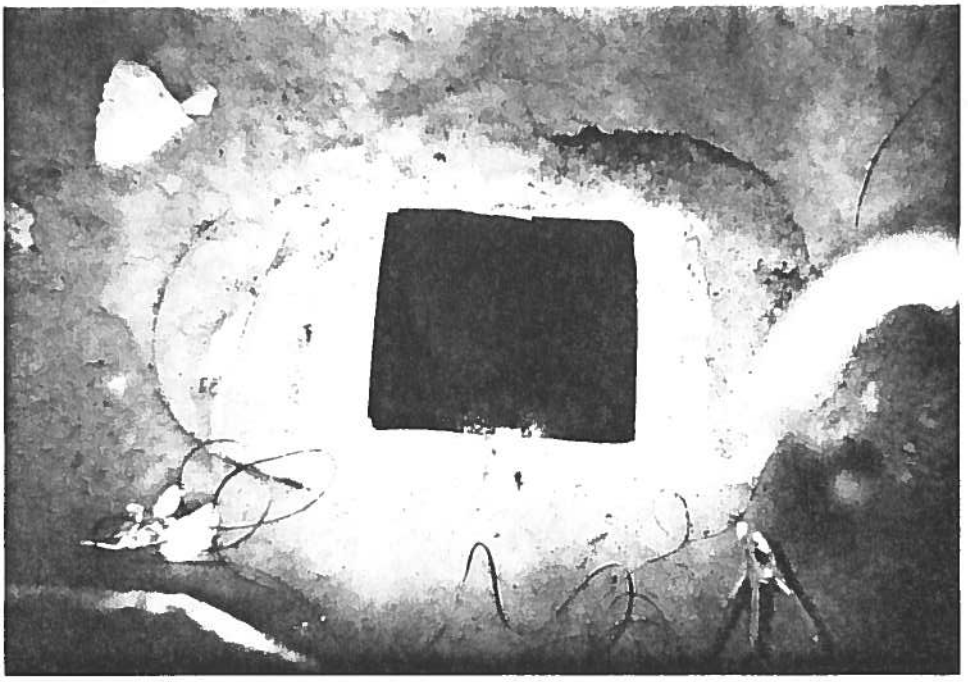
PICTURE DOCUMENTATION

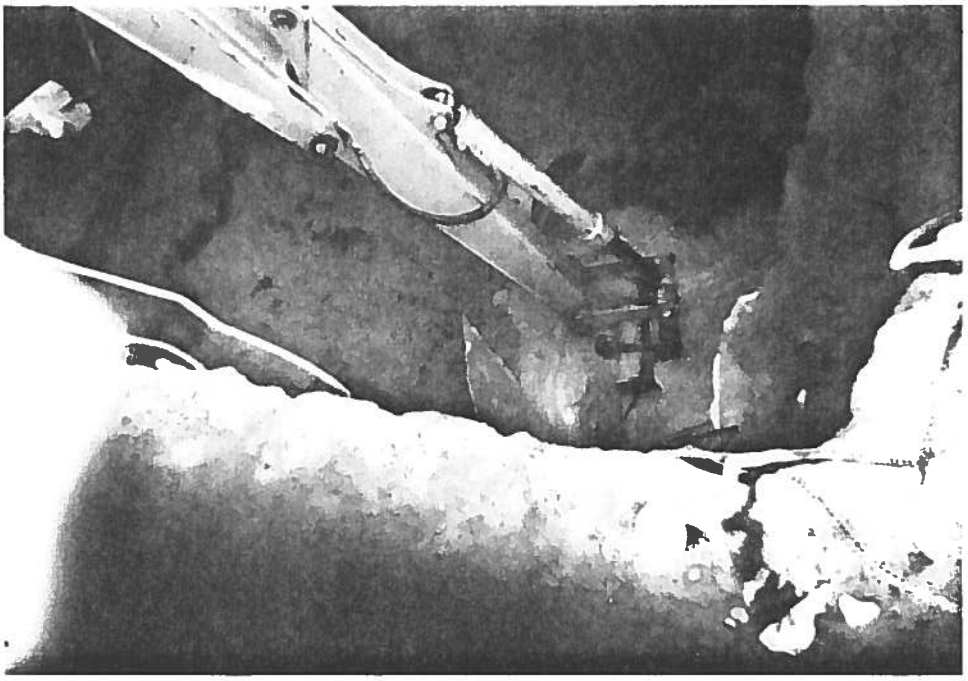


Tank Venting In Progress

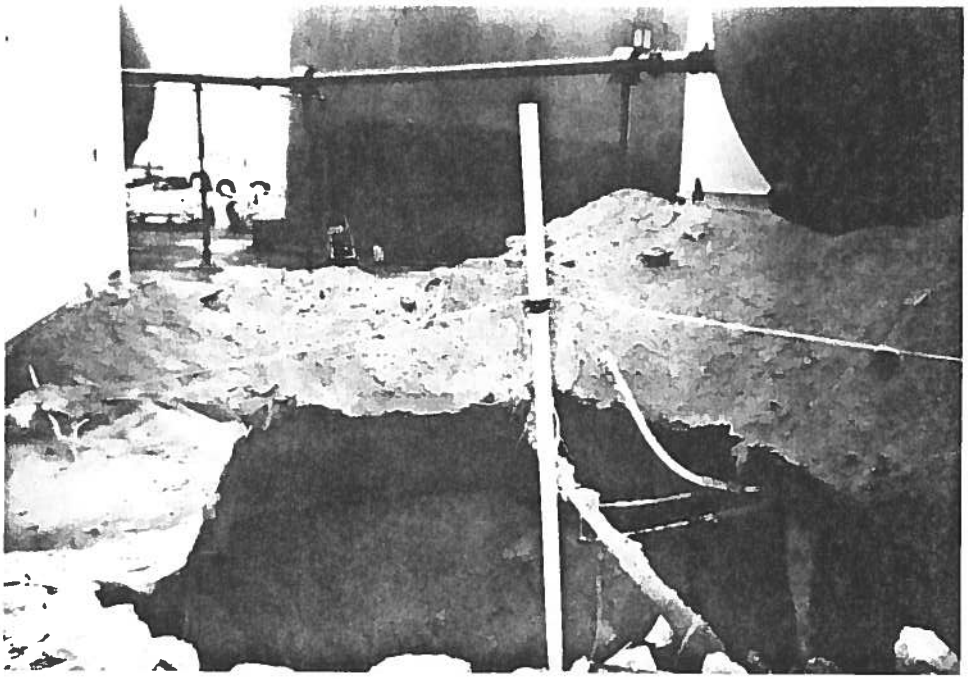
NOTE: Due to McDonnell Douglas Security Protocols a complete picture documentation of the events was not possible.

Tank Venting and
Cleaning Operations





Fibreglass UST Beeing Pulled Out In Pieces



2" PVC Groundwater Monitoring Well Beeing Installed In The Pit. The Well Later Was Replaced With a 6" PVC.

APPENDIX G

UST CLOSURE REPORT FORM

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER POLLUTION CONTROL PROGRAM

DRAFT

UST CLOSURE REPORT PART A (PAGE 1)

FOR MDNR USE ONLY

Date received _____ County _____ UT# _____ OW ID _____

Region _____ LSP# LU _____

SECTION I FACILITIES INFORMATION

Facilities name McDonnell Aircraft Company UT# 05062284002;MOD000818963

Address P.O.BOX 516 Latitude

County St.Louis City St. Louis Zip code 63166 Longitude

Telephone 232-3319 Section, township, and range

Date of Project Initiation 12-29-92 Date of Project Completion 12-31-92

SECTION II USTs CLOSED

Tank #	Capacity (gal)	Age	Date Removed from Service (use)	UST Construction Material	Product Stored	Method of Closure *
1	2,000	8/14	12-30-92	Fibregl	Jet Fuel	Removal

Attach Documentation of Tank Cleaning

* Removal, In-place

SECTION III UST OWNER INFORMATION

Name McDonnell Aircraft Company

Address P.O.BOX 516

County St.Louis City St. Louis Zip Code 63166

Contact Person G.G. HELLER Telephone 314-232-3319

SECTION IV INFORMATION ON PARTY PERFORMING CLOSURE

Name Geo Environmental Services, Inc.

Address 8515 Delmar, Suite 212

County St. Louis City St. Louis Zip Code 63124

Contact Person Harlan H.Bengtson,P.E. Telephone 314-991-2060

SECTION V TANK DISPOSAL INFORMATION

Tanks were transported to PEORIA DISPOSAL CO. (name)
PEORIA, IL 61612-9071 (address)

for: ☐ recycle (salvage) or ☒ landfill or ☐ unregulated use

Attach appropnate documentation of tank disposal

SECTION VI SOIL DISPOSAL INFORMATION

40-50 cubic yards of soil excavated

40-50 cubic yards of non-contaminated soil returned to pit

0 cubic yards of contaminated soil disposed or treated at _____

Attach appropnate documentation of soil disposal or treatment

Attach copy of "Virgin Product Disposal Form" or "Special Waste Form", as appropriate

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER POLLUTION CONTROL PROGRAM

DRAFT

UST CLOSURE REPORT PART A (PAGE 2)

SECTION VII SLUDGE/RINSATE DISPOSAL

100 gallons of sludge/rinsate were removed and disposed of by:

Hazardous waste disposal firm Sludge was placed into 2-55 gal. steel drums

Address for shipment to a hazardous waste fuel blender by MDC. Associated rinse water generated from cleaning of tank was drummed & later pretreated at the MDC on site pretreatment plant prior to discharge to the local POTW.

Attach appropriate documentation of waste disposal

SECTION VIII RESULTS OF SOIL ANALYSIS (Report all results in ppm and attach lab results)

Sample ID	TPH	Benzene	Toluene	E-Benzene	Xylene	Heavy Metals*
T00081 8963-1-13 (#1)	10ppm	ND	ND	ND	ND	-
T00081 8963-DG6 (#2)	10ppm	ND	ND	ND	ND	-
JT0008 8963-Cntr of Fill Line (#3)	10ppm	ND	ND	ND	ND	-

Attach chain of custody documentation

* For waste oil USTS only. List any results above detection limits.

SECTION IX LOCATION SKETCH

Attach a sketch of the location which inludes:

- size and contents of all USTs and piping and lengths of pipe runs
- locations of all fuel lines and pump islands
- location of the tank pit boundaries

Indicate scale of the sketch in feet

Designate each sample location on the skelch using the specified labeling format

SECTION X PHOTOGRAPHS

Attach color photographs of the following:

- each side of the removed UST, if the UST is removed
- each wall of the excavation pit, if UST is removed
- each sealed vent or pipe line
- sealed UST, if closed in-place

Comments The fibreglass tank was shredded into numerous pieces. Due to McDonnell Douglas Security Protocols a complete picture documentation of the events was not possible.

I certify that the information in this report is true and complete

Party performing closure GEO ENVIRONMENTAL SERVICES, INC Date 3-10-93

Owner/operator MCDONNELL AIRCRAFT COMPANY Date 3-10-93

MAILING ADDRESS

*-See attached explanation

If TPH < 25 ppm, total BTEX < 1 ppm, and Benzene < 0.5 ppm AND the amount of soil excavated is less than (# of tanks x 100 cubic yards), complete Part A of the UST Closure Report and submit it to:

✓ Missouri Department of Natural Resources
Attn: UST Coordinator
P.O. Box 176
Jefferson City, Missouri 65102

If any of the preceeding conditions have been exceeded complete both Parts A and B of the UST Closure Report and submit it to:

Missouri Department of Natural Resources
Environmental Services Program
Leaking Underground Storage Tank Unit
P.O. Box 176
Jefferson City, Missouri 65102

ENV EX

ENVIRONMENTAL EXCAVATORS, INC.

Built on Honesty and Integrity

Illinois U $ T Registered

R.C.COOPER CONTARACTING
P.O. BOX 1384
24 EDGEWORTH
MARYLAND HEIGHTS, MO. 63043

Dear Mr. Cooper

Environmental Excavators, Inc. adheres to the required procedures of the Illinois Office of the State Fire Marshal, the recommended procedures of The American Petroleum Institute and The Missouri Department of Natural Resources.

All tanks that where removed from the McDonnell Douglas facility in St. Louis were properly monitored with a combustable gas indicator, vented with surged air, and opened. Once opened the tanks were rinsed with a Bio-solve degreaser and washed with a high pressure washer at 1200 PSI. After washing they were rendered no longer useable as USTs. Rinsate and sludge were placed in 55 gallon drums and stored on-site. Tanks were then shredded as disposed of.

Environmental Excavators, Inc. is not responsible for any occurrences resulting in contamination of the tanks after removal from the site above mentioned.

Please call if you have any questions or if further information is needed.

Sincerely,

Michael M. Cross
Environmental Excavators

30 Kenn Drive • Belleville, Illinois 62223 • Mobile - 618-578-9513 / Bus. - 618-235-9400